November 15, 2004

Dear Forum Participant

Attached are the minutes of the Aeronautical Charting Forum, Instrument Procedures Group, (ACF-IPG) held October 25-26, 2004 and sponsored by Advanced Management Technology Incorporated (AMTI). Attached to the minutes are an office of primary responsibility (OPR) action listing, an attendance listing, as well as meeting briefing material.

Please review the minutes and attachments for accuracy and forward any comments to the following:

Mr. Tom Schneider
FAA/AFS-420
P.O. Box 25082
Oklahoma City, OK 73125

Phone: 405-954-5852
FAX: 405-954-2528
E-mail: thomas.e.schneider@faa.gov

Copy to:

Mr. Bill Hammett
FAA/AFS-420 (ISI)
201 Breakneck Hill Rd.
Westbrook, CT 06498-1414

Phone: 860-399-9407
FAX: 860-399-1834
E-mail: isiconn@comcast.net

The AFS-420 web site contains information relating to ongoing activities including the ACF-IPG. The home page is located at http://av-info.faa.gov/terps/ACF-IPG.htm. This site contains copies of past meeting minutes as well as a chronological history of open and closed issues to include the original submission, a brief synopsis of the discussion at each meeting, the current status of open issues, required follow-up action(s), and the office of primary responsibility (OPR) for those actions. We encourage participants to use this site for reference in preparation for future meetings.

ACF Meeting 05-01 is scheduled for **May 9-12, 2005** with the FAA's National Aeronautical Charting Office (NACO), Silver Spring, MD as host. Meeting 05-02 is scheduled for **October 24-28** with the Air Line Pilot's Association (ALPA), Herndon, VA as host.

Please note that **meetings begin promptly at 9:00 AM on Monday**. Please forward new issue items for the 05-01 IPG meeting to the above addressees not later than April 15th. A reminder notice will be sent.

We look forward to your continued participation.

Thomas E. Schneider, AFS-420
Co-Chairman, Aeronautical Charting Forum,
Chairman, Instrument Procedures Group

Attachment: ACF minutes

GOVERNMENT/INDUSTRY AERONAUTICAL CHARTING FORUM
INSTRUMENT PROCEDURES GROUP
Meeting 04-02 Rosslyn, VA
October 25-26, 2004

1. Opening Remarks:

Mr. Tom Schneider, AFS-420, Flight Standards co-chair of the Aeronautical Charting Forum (ACF) and chair of the Instrument Procedures Group (IPG) opened the meeting at 9:00 AM on October 25, 2004. Advanced Management Technology Incorporated (AMTI) hosted the meeting at their Rosslyn, VA headquarters. Mr. Tom Reiss made welcoming and administrative comments on behalf of AMTI. A listing of attendees is included as attachment 2.

2. Review of Minutes of Last Meeting:

Bill Hammett, AFS-420 (ISI) briefed that the minutes of ACF-IPG 04-01, which was held on April 26-27, were electronically distributed to the ACF-IPG Master Mailing List on June 1st. The minutes were also posted on the ACF-IPG web site and a copy provided each attendee. No comments were received, ergo, the minutes are accepted as published.

3. Briefings:

TERPS Changes and 14 CFR, Part 97.

Tom Schneider, AFS-420, provided an update briefing regarding the recent rule change to 14 CFR, Part 97.20. A notice of proposed rulemaking (NPRM) was issued on October 5 to reverse the previous change that included Orders 8260.3, *U.S. Standard for Terminal Instrument Procedures (TERPS)*, and 8260.19, *Flight Procedures and Airspace* as incorporated by reference (IBR). The change will revert the rule back to it's original wording that only specifies the associated 8260-series forms as IBR. Once approved, this will put the TERPS criteria process back on track. Tom agreed to keep the group updated on progress.

4. Old Business (Open Issues):

a. 92-02-104: TERPS paragraph 323a, Precipitous Terrain Additives.

Tom Schneider, AFS-420, briefed that as a result of discussion at the last ACF meeting, AFS-400 issued a policy memorandum to AVN-1 on June 18 directing the IAPA precipitous terrain programming be implemented as soon as possible. Specific guidelines and documentation requirements were also provided. Brad Rush noted that since Baro-VNAV is not authorized in areas of precipitous terrain, the initial application is to LNAV/VNAV IAPs. No problems have been encountered thus far. The group agreed the issue could be closed.

Status: Item Closed.

b. 92-02-105: Review Adequacy of TERPS Circling Approach Maneuvering Areas and Circling at Airports with High Heights Above Airports (HAAs).

Bill Hammett, AFS-420 (ISI), briefed a status update from Jack Corman, AFS-420, that TERPS change 20 will contain a revised Table 4, Circling Approach Area Radii, with radii values variable according to altitude strata. High altitude airport circling areas will be larger to account for higher true airspeeds. This is an interim step toward establishing a new method for circling area construction in subsequent TERPS changes. Randy Kenagy questioned whether pilot education material would be disseminated so that pilots would know of the larger circling radii. Tom Schneider, AFS-420, explained that this was not planned at present as the intent is not for pilots to change the way they circle; rather, the goal is to ensure that the TERPS circling obstacle evaluation area (OEA) is adequate to encompass current circling maneuvers. Bill also requested industry input on parameters (bank angles, speeds, techniques, etc) to be used in the ASAT study. Randy offered himself as a focal point to provide input for the study.

Status: 1) AFS-420 to develop stratified criteria for circling OEAs for inclusion in TERPS Change 20; and, 2) request AFS-440 accomplish a ASAT study to determine required circling OEA dimensions. Item Open (AFS-420/440).

c. 92-02-110: Cold Station Altimeter Settings (*Includes Issue 04-01-251*).

Vinny Chirasello, AFS-410, briefed that his office submitted the issue to the Performance-based-operations Aviation Rulemaking Committee (PARC) and a task force was formed. FAA has received no feedback thus far. Kevin Comstock, ALPA, briefed that he was at the PARC when the issue was presented and the PARC tasking was limited. Kevin recommended that AFS-400 ensure that the PARC is aware that a comprehensive temperature compensation policy is needed to include required actions for all segments of an approach, other procedural minimum altitudes, ATC assigned altitudes, altitudes specified by procedure designers, avionics coded altitudes, etc. Frank Flood, Air Canada, offered his organization as a resource for the FAA on the issue. Ted Thompson, Jeppesen, commented that FAA Notice 8000.287 requires charting of both minimum and maximum temperature limitation notes. Ted noted that most maximum temperatures are extreme to the point of being comical, and of no operational value to pilots; e.g., some cases in excess of 158 degrees Fahrenheit. Ted suggested that FAA might want to re-examine the min/max temperature range values to be included in notes, or change the required wording of the notes to make them meaningful in the context of reasonable, real-world weather values while still addressing the potential affect on operations. The MITRE representatives supported Ted's comments.

Status: AFS-410 will continue to monitor the issue and report. Item Open (AFS-410).

d. 96-01-166: Determining Descent Point on Flyby Waypoints (Originally: Definition of "On Course").

Vinny Chirasello, AFS-410, reported that there has been no progress on this issue. Tom Schneider recommended the issue be presented to the AFS-400 Technical Review Board (TRB) meeting for input and Vinny agreed.

Status: AFS-410 to place the issue on the AFS-400 TRB agenda and continue efforts to develop AIM guidance. Item Open (AFS-410).

e. 98-01-197: Air Carrier Compliance with FAA-specified Climb Gradients.

Tom Schneider, AFS-420, briefed that Jerry Ostronic, AFS-220, was unable to attend the meeting due to travel requirements. However, Jerry did provide a written status report on the issue, which follows below:

October 19, 2004

Mr. Thomas E. Schnedier
Chair Aeronautical Charting Forum
Instrument Procedures Group

Tom,

Please extend to your group my regrets for not being able to participate in this session of the group's meetings. What your group does is very important to aviation safety and is greatly appreciated by the Air Transportation Division. Unfortunately I have not mastered how to be in multiple places at the same time. During your meeting I will be overseas working on operational issues with the implementation of the Airbus A380.

I wanted to bring you and the group up to date on my efforts on the climb gradient flight crew information issue since our last meeting in April.

As you know rulemaking is a long process that can take several years depending on the priority of the project. In reviewing aircraft accident statistics we were unable to identify a significant accident that was a direct result of the flight crew not having gross climb gradient information available to them at departure. Without this sort of statistical information we did not feel we could elevate a rulemaking project on this issue to the priority level that would have it acted on quickly. We worked through existing regulation in an effort to find a section that may provide the FAA the latitude to levy this requirement on air carrier operators. In verbal discussions with our legal group we identified the possibility of this latitude under CFR Parts 121.117 and 121.97. We developed the guidance material and policy for implementing these requirements for air carrier operations under Part 121. After several renditions this material gained acceptance by all the branches within the Air Transportation Division.

This draft document was then provided to our legal council for their concurrence that the FAA has the legal authority to require this information be supplied to the flight crews by the operator. This legal review is the typical process when flight standards establishes regulatory policy.

I learned just this morning, from more senior legal council, that the current verbiage in Parts 121.117 and 121.97, and the preamble to those regulations does not support our proposed policy and guidance on requiring air carrier operators to supply gross climb performance information to their flight crews.

Unfortunately this takes us back to where we were at our April meeting. The recommendation from legal council, and my superiors, is to have the group, or members of the group, petition the FAA for rulemaking under CFR Part 11. Although our primary focus for policy and guidance material was operations under Part 121 many other types of operations may benefit from a rule changes to provide this information. The petition for rulemaking could include all

the applicable rules for the various sections of the regulations to cover all types of operations or possibly a change to CFR Part 91 Subpart B, which would probably accomplish the same objective.

I am sorry I do not have more encouraging information to pass along at this time. I hope and trust you will have a productive meeting and look forward to working with you at the next meeting.

Sincerely

Jerry Ostronic
FAA AFS-200

Tom read the report and a copy was provided all attendees - discussion followed. Frank Flood, Air Canada, briefed that information and tables are currently available from aircraft manufacturers. Frank provided a sample table that is included in Air Canada's Flight Operations Manuals. A copy of the sample table is included as attachment 3. The group consensus was that the table would be a useful tool. Mitch Scott, Continental Airlines, voiced objection to a rulemaking effort that would levy the performance requirement on dispatchers. Dispatchers would not be able to provide an immediate, real-time response to requests due to other job requirements. Mark Ingram, ALPA, requested the FAA continue to pursue a formal response from AGC on the issue. Tom Schneider, AFS-420, stated the issue would remain open with AFS-200 as OPR.

Status: AFS-200 to continue to work the issue and report. Item Open (AFS-220).

f. 98-01-199: RVR Accuracy and Conflict with Flight Visibility.

Vinny Chirasello, AFS-410, briefed that all paperwork has been completed to make the RVR conversion chart in the AIM and the TPP legend identical to what is published in TERPS. The AIM material has been forwarded for inclusion in the Feb 05 AIM. Mike Riley, NGA, briefed that the Requirement Document (RD) for the TPP change has been approved and it will be charted on November 25th. Tom Schneider briefed that the proposed TERPS re-write of Chapter 3 may require further changes when approved. All agreed the current issue could be closed.

Status: Item Closed.

g. 00-02-229: Turbine Powered Holding

Bill Hammett, AFS-420 (ISI), briefed that this issue remains open pending receipt of a formal memorandum from ATP-120 to AFS-420 stating that 175 KIAS holding is no longer required above FL 180. The previous ATP-120 representative had stated this position in open forum; however, AFS-420 would like the position in writing prior to revising Order 7130.3, *Holding Pattern Criteria*. Tom Schneider briefed that he, as chair of the IPG, took an IOU to follow this up with ATP-120. He briefed that despite frequent e-mails, phone calls, etc., he has been unable to resolve the issue. He plans an in-person visit to the responsible Air Traffic office following the ACF meeting.

Editorial Note: *Tom Schneider spoke with Dave Madison, ATP-101, on the issue during a brief impromptu meeting on October 26th. Dave provided a new Air Traffic point of contact for the ACF-IPG; however, Tom was unsuccessful in making contact with the staff worker.*

Status: 1) The ACF-IPG chair will continue to follow up the memorandum requirement with the Air Traffic POC 2) AFS-420 to revise Order 7130.3 when notification is received. Item Open (ATP-100 & AFS-420).

h. 01-01-234: Designation of Maximum Altitudes in the Final Approach Segment

Bill Hammett, AFS-420 (ISI) noted at the last meeting that there was still clean up required on the VOR/DME RWY 7 approach at Orlando Executive. If this approach is not used simultaneously with Orlando Int'l runway 17 & 18 approaches then the maximum altitude restriction should be deleted. If the approach is used, the restriction should be changed to maximum 1200' and the missed approach note added to the procedure. Brad Rush, AVN-101, briefed that subsequent to the last meeting, Orlando ATC has reversed their position and now wants simultaneous use of the VOR/DME RWY 7 approach. He further briefed that amendments are in work and should be completed prior to the next meeting.

Bill also noted that the Pilot/Controller Glossary (PCG) was updated in August to resolve the contradiction in the PCG definition of "Missed Approach" with the missed approach guidance in AIM paragraph 5-4-19b, and the Instrument Flying Handbook (page 10-22). Ernie Skiver, AFS-410, added that further expansion of the definition is currently being coordinated with Air Traffic.

Status: 1) AVN-101 to amend the VOR/DME RWY 7 approach at Orlando Executive. 2) AFS-410 to further expand the PCG definition of Missed Approach. Item Open (AVN-101 and AFS-410).

i. 02-01-238: Part 97 "Basic" Minima; ATC DP Minima, and DP NOTAMs.

Bill Hammett, AFS-420 (ISI), briefed that he had begun drafting the document change proposal (DCP) to Order 7930.2 to include SIDs and STARs under the FDC NOTAM process. However, the forum must keep in mind that this is an Air Traffic Order and that Flight Standards assistance in accomplishing this change is secondary to normal business. Bill also requested that Paul Ewing, ATO-R (AMTI), coordinate an Air Traffic position on STARS being included under the FDC process.

Editor's Note: *Paul Ewing, ATO-R (AMTI), confirmed after the meeting that Air Traffic has no objection to including STAR NOTAMs under the FDC process.*

Status: 1) AFS-420 to continue to develop DCP information for ATP-320. Item Open (AFS-420).

j. 02-01-239: Minimum Vectoring Altitude (MVA) Obstacle Accountability; Lack of Diverse Vector Area (DVA) Criteria.

Bill Hammett, AFS-420 (ISI) briefed that due to the delay in processing TERPS changes caused by the revised Part 97.20, the new, expanded criteria for MVAC development will be issued as a FAA Notice. The draft Notice is currently in internal AFS coordination and will be

coordinated through Air Traffic prior to implementation. Brad Rush, AVN-101, briefed that a MVA automation tool is still under development by Air Traffic and a prototype should be available for demonstration in the near future. Mark Ingram, ALPA, stated that his office would be interested in attending any public demonstration.

Status: 1) AFS-420 to monitor progress on the revised criteria. 2) AVN-101 to provide progress reports on the MVAC development tool. Item Open (AFS-420 and AVN-101).

Editor's Note: *After the meeting, Brad Rush, AVN-101 agreed to coordinate with Barry Davis, Manager, Aeronautical Information Management, to check the feasibility of a demonstration of the MVA automation tool for the next ACF.*

k. 02-01-241: Non Radar Level and Climbing Holding Patterns.

Bill Hammett, AFS-420 (ISI) noted that ATP-120 still has an IOU from previous meetings to issue an AT Bulletin article to ensure that controllers are aware of which holding patterns have been evaluated for a climb-in hold (CIH). This information is currently only available on the Form 8260-2 supporting for fix/NAVAID. A review of bulletins on the Air Traffic publications web site indicates that this has not been accomplished to date. Tom Schneider, IPG Chair, took an IOU to follow up on this issue with Air Traffic.

Status: 1) ACF-IPG chair to follow up the issue with Air Traffic. 2) ATP-120 to prepare an ATC Bulletin addressing impromptu CIH clearances. Item Open (ATP-120).

l. 02-01-243: Holding Pattern Definition.

Bill Hammett, AFS-420 (ISI), briefed that the revised holding pattern depictions have been included in the AIM as Figures 5-3-5, 5-3-6, and 5-3-7. The NBAA comments at the last ACF-IPG were discussed within AFS-420 and it is not believed that another figure depicting advanced FMS holding is warranted. Information for these systems is included in the avionics operating manual. The AIM contains basic information and is adequate as published. This portion of the issue is closed

Regarding the acronym for "along-track-distance'; research indicates that "ATD" has been the established acronym since the concept was first initiated. This is reflected in all RNAV-related technical documents including FAA 8260-series criteria and policy orders, charting specifications, as well as the AIM Appendix 3. The Pilot/Controller Glossary is in error and should be revised to reflect agreement with other publications. AFS-420 will forward a memorandum to Air Traffic to have the PCG reflect ATD as the appropriate acronym.

Status: AFS-420 to forward memorandum to Air Traffic to update the PCG.
Item Open (AFS-420).

m. 02-02-246: Turn Angle Limits for RNAV Approaches Without TAAs.

Paul Ewing, ATO-R (AMTI), briefed that a telcon between NBAA and Air Traffic was held to work out differences on the issue. A revised Document Change Proposal (DCP) has been developed and was scheduled to go out for public comment in October; however, it is still in coordination within the Terminal Procedures Branch. It is now targeted for release in November. Bob Conyers, NBAA, questioned controller procedures if final approach courses

and intermediate fixes (IFs) are not displayed on radar video maps. Kevin Comstock, ALPA, questioned whether stepdown fixes within intermediate segments could cause confusion. Paul responded that controllers are trained on the approaches for which they are responsible. Kevin Jones, Southwest Airlines, noted that direct-to-IF clearances for non-RNAV approaches are common practice in today's air traffic world and questioned if non-RNAV approaches will be included in the DCP guidance. Paul responded that the DCP would initially only address RNAV approaches; however conventional procedures will be included at a future date. The group consensus is that direct-to-IF clearance procedures should be pursued for all approaches. Paul recommended that this recommendation should be provided when the DCP is released for public comment. ALPA recommends that at a minimum, those representatives and their organizations participating in the ACF-IPG should be allowed the opportunity to comment on the DCP guidance. Bob further asked if a legal interpretation regarding whether a radar monitored "direct IF" clearance can be considered a "radar vector" had been requested [Part 91.175(j)]. Paul responded that an AGC opinion had not been requested on this subject.

Status: ATP-500 and ATP-120 will continue to work the issue and report. Provide ACF attendees the opportunity for public comment on the DCP. Item Open (ATP-500/120).

n. 03-01-247: Holding Pattern Criteria Selection and Holding Pattern Climb-in-Hold Issues.

Tom Schneider, AFS-420, briefed that a study is ongoing by AFS-440 on this issue. Thus far, the desktop analysis has been completed for helicopter holding. The analysis confirmed that the patterns in FAA order 7130.3, *Holding Pattern Criteria*, Chapter 5, does not provide sufficient protection for aircraft conducting an entry to holding on the non-maneuvering side of the holding pattern. The HELICOPTER/STOL holding patterns criteria did not include a GPS horizontal fix error (+/- .5 NM) allowance, nor did it protect for an aircraft being blown off course by a crosswind on the initial turn when the aircraft is under dead reckoning guidance on the initial turn outbound. As a result of the study thus far, AFS-420 issued a policy memorandum to AVN-1 on June 17th directing that Order 7130.3A, Chapter 2, Conventional Holding Criteria be used to develop all RNAV holding patterns. The minimum pattern size to be used in the interim for helicopter RNAV procedures is pattern template size four.

Testing to be completed is helicopter holding at the FAA Tech Center, which will be used to validate AFS-440 helicopter computer models that will then be used for data collection for criteria development. Also, FAA order 7130.3, Chapter 6 is to be re-evaluated. The time frame for the completion of these tests by AFS-440 has been revised due to the loss of a key person that was responsible for these tests. Tom handed out a revised project completion timeline. The tentative date for completion of these tests by AFS-440 and submitting the data to AFS-420 is 1 July 2005. Based on these time lines AFS-420 expects to have criteria ready for review before 3 March 2006.

Status: AFS-440 to continue ASAT/simulator analysis and report. Item Open (AFS-440).

o. 03-02-248 Substitution of GPS for Missed Approach Operations.

Vinny Crirasello, AFS-410, briefed that his office is still gathering data on this issue and there is no change in status.

Status: AFS-410 will continue to research the issue and report. Item Open (AFS-410).

p. 04-01-249 RNAV Terminal Routes for ILS Approaches.

Tom Schneider, AFS-420, briefed that construction of an RNAV transition to ILS/MLS final segments will be included in the consolidated 8260.RNAV order. The order should be completed in calendar year 2005. Ted Thompson, Jeppesen, reported that ARINC capability does exist for coding this type procedure; however, it is currently unused due to operational concerns; i.e., chart/database/procedure source harmonization issues. Mitch Scott, Continental Airlines, questioned if this would require additional procedure naming; i.e., multi-approach procedure titles. Brad Rush, AVN-101, responded that it should not. He visualizes that the procedure will retain the conventional name and any RNAV transition would include a note applicable to the specific transition; e.g., "RNAV-equipped aircraft only", such as is currently done for DME.

Status: AFS-420 to track criteria development and report. Item Open (AFS-420.

q. 04-01-250 RNAV and Climb Gradient Missed Approach Procedures.

Tom Schneider, AFS-420, reported that RNAV missed approaches with climb gradients and small RNP containment values are currently available under Notice 8000.287, *Airworthiness and Operational Approval for Special Required Navigation Performance (RNP) Procedures with Special Aircraft and Aircrew Authorization Required (SAAAR).* It is not currently planned to expand this application to public Part 97 procedures. Brad Rush, AVN-101, noted that the SAAAR Notice has a flaw in the missed approach required obstacle clearance (ROC) application that he will address to AFS-420. Kevin Comstock, ALPA, stated that if the SAAAR criterion is made public, FAA must ensure that adequate training/pilot education material is prepared.

Status: AFS-420 to track status of the combined RNP Order. Item Open (AFS-420).

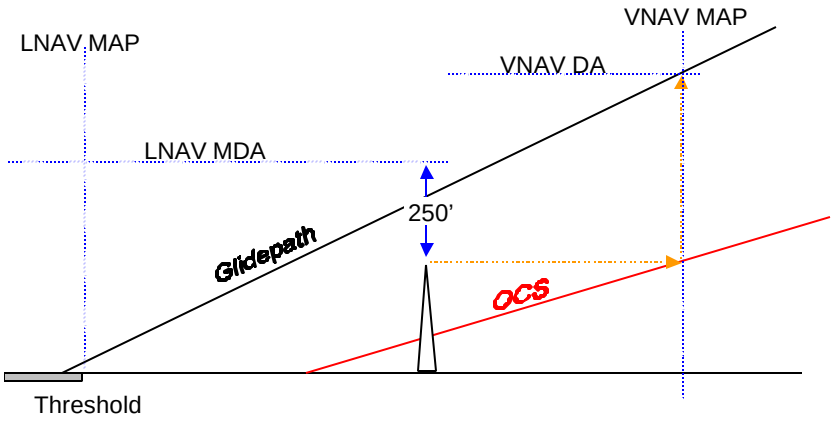
r. 04-01-253 LNAV/VNAV Landing Minimums.

Tom Schneider, AFS-420 briefed the following report from Jack Corman, AFS-420:

Recognizing the CFIT accident rate is 7 times greater for nonprecision (2-D) approach procedures than for vertically guided (3-D) approach procedures, the FAA and industry agreed to promote flying 3-D procedures by providing LNAV/VNAV approach procedures to all 14 CFR Part 139 runways. A 3-D approach procedure enhances safety by placing the aircraft in a position and on a trajectory for landing at DA (MAP) while a 2-D procedure allows the aircraft to proceed at MDA to the runway threshold (MAP) in a more difficult position to complete a landing. The provision of 3-D procedures is an effort to lower the accident rate, not necessarily to achieve lower minimums.

It is very possible for the visibility minimums or DA value of a 3-D approach to be greater than a 2-D approach. 2-D approaches require an MDA value that is 250' (ROC value) above the highest obstacle. Additionally, the 2-D approach procedure MAP is usually at the runway threshold; therefore, the distance from MAP to threshold is zero. On a 3-D approach procedure, the DA (MAP) occurs at a point on the glidepath, which is a distance from the threshold determined by where it occurs on the glide path. The no-light visibility value (based

on MAP to threshold distance) of a given 3-D approach may be greater than the 2-D procedure.



At locations where the GQS is penetrated or precipitous terrain is identified, 3-D approach procedures are not allowed. Where remote altimeter is used, BaroVNAV (LNAV/VNAV) lines of minima will be N/A.

The conclusion is that this is a long-standing TERPS visibility consideration of MAP-to-threshold distance. This consideration creates a contrast between 2-D and 3-D approach procedures. As the acceptance and adoption of 3-D procedures progresses-the perception of this phenomenon as a problem should change.

Ted Thompson, Jeppesen, briefed that his organization had resolved the "N/A" problem unique to their charts. In addition, he stated his organization (Jeppesen) will take the above report back to ATA.

Status: Item Closed.

s. 04-01-255 Rounding of HAT Values for LPV and RNP (SAAAR) Approaches.

Tom Schneider, AFS-420, briefed that the issue was studied and the revised RNAV and RNP criteria will round DA values to the next higher foot value, consistent with ILS. Randy Kenagy, AOPA, stated that FAA has committed to publishing 150 new LPV IAPs this year, to be followed by 300 next year. He asked if the revised rounding policy could be accelerated. Tom took the IOU to check on this.

Status: AFS-420 to track the issue and report. Item Open (AFS-420).

5. New Business:

a. 04-02-256 Impact of Temporary Runway End Changes on RNAV Procedures.

New issue introduced by Ted Thompson, Jeppesen. Ted noted that unplanned changes to runway end coordinates present a significant problem with the ARINC coding of RNAV approaches. When the runway end is designated as the missed approach point, the IAP data string retrieves this information from the airport file; e.g. RW23. Therefore, moving the runway end in contradiction to the officially-designated position of the MAP invalidates the coding rules. For example, ARINC coding does not allow coding of a runway end prior to the

MAP. These movements cause changes in descent angles, segment lengths, and when runways are extended, it places the approach outside TERPS design criteria. Eric Secretan, NACO, stated that NACO uses an internal "rule" that allows for a variance of up to 0.1 NM between the relocation of a runway end and the official source MAP. Ted replied that Jeppesen does not have such a tolerance and expressed concern about the changes becoming official through NFDD action with no change to the official source (8260-series forms) for the affected approach. When a runway end position changes but the MAP and related values on the 8260 are not modified, it creates a conflict between "official source" and the charted/coded procedure. This, in turn, creates conflict in terms of so-called database integrity/certification requirements. Both Jeppesen and NACO remove the procedure from their respective databases when the NFPO states via NOTAM that straight-in minimums are NA. Since some airports only have RNAV approaches published, this affects the NAS in that the airport reverts to VFR only. After lengthy discussion, it was agreed that Jeppesen and NACO actions to withdraw the IAPs from their databases, based solely on the "straight-in minimums NA" NOTAM are valid. Brad Rush, AVN-101, briefed that the problem is caused because there are too many players involved in making official changes to airport data through NFDC and closer coordination through the Regional Airspace and Procedures Team could prevent most problems. Brad also commented that if Jeppesen or NACO receive complaints from Air Traffic about the removal of RNAV procedures from public databases as a result of these situations, they could refer the complaints him. Bill Hammett, AFS-420 (ISI) emphasized that the FPO, as chair of the RAPT, is a good place to start emphasizing better coordination at the regional level and AVN-1, as chair of the NAPT, could emphasize better coordination at the FAA headquarters level. Brad also recommended that establishing waypoints for RNAV missed approach points vice coding the runway threshold would help resolve the problem, especially for temporary threshold displacements. Ted Thompson responded that this idea was a step backward and did not address the underlying problem. Mark Ingram, ALPA, noted the AFS-400 letter of September 19, 2002, provided guidance for aircraft operators. The ACF-IPG discussion indicates that perhaps this guidance is only valid when a runway threshold is displaced, not extended. Ted concluded with a remark that, with the increasing number of RNAV IAPs, including WAAS approaches, which rely on FAS data blocks, and the expected increase in the number of RNP RNAV procedures, something must be done, now, to address the lack of coordination between airports and procedures with regard to the critical and essential use of runway end information.

Status: 1) AVN-101 to work the advance notification issue through the RAPT and NAPT. 2) AFS-420 to review the guidance provided to ALPA. Item Open (AVN-101 and AFS-420).

b. 04-02-257 Circling Visibility and LNAV/VNAV Straight-in Minima.

New issue introduced by Randy Kenagy, AOPA. AOPA is concerned that LNAV circling minimums are excessively penalized on LNAV/VNAV IAPs by application of the TERPS criteria that requires that circling minima not be lower than straight-in minima. In cases of high MDAs, the VNAV MAP-to Threshold distance requires a much higher visibility than that required for a LNAV approach with the MAP at (or within 1 SM) of the threshold (also see issue 04-01-253). The obvious solution is to publish separate approaches; however, the group unanimously was opposed to this. Bill Hammett, AFS-420 (ISI), recommended the issue be brought before the AFS-400 Technical Review Board (TRB).

Status: AFS-420 to present the issue for discussion at an AFS-400 Technical Review Board. Item Open (AFS-420).

c. 04-02-258 Vertical Navigation (VNAV) Approach Procedures Using DA(H); OpSpec C073.

New issue introduced by Hooper Harris, AFS-410. AFS-410 is concerned that certain technical aspects of Flight Standards Handbook Bulletin for Air Transportation (HBAT) 99-08 may be flawed. Specifically, the Bulletin introduces the term DA(H) for the use of VNAV in conducting certain IAPs. However, it does not provide satisfactory guidance to operators on the method of determining if a visual segment assessment has been made by the FAA to validate there are no penetrations to the 34:1 surface, or the appropriate criteria for industry assessment of the visual segment. In addition, it allows *carte blanche* application of the operational concept of using the MDA as a DA in cases where the underlying non-precision approach may not be suitable. Finally, the Bulletin provides no authority for Part 91 operators to use this capability. It was pointed out by representatives of Jeppesen that these actions by FAA represented a major impact on Jeppesen since the company responded years ago, and at the insistence of many Part 121 and 135 operators, took action to include applicable notations on its IAP charts based on the FAA's original HBAT 99-08 and associated criteria. The action was made at the request of the Air Transport Association and several major airlines/operators who incorporated VNAV operations and the 'DA in lieu of MDA maneuver' extensively into their pilot training programs. Hooper stated that AFS-410 will lead an ad hoc group to refine technical standards for pilot use of a MDA as a DA and develop charting standards to indicate where the application may be used. In addition to the AFS-410 staff, volunteers for the ad hoc group include Michael Riley, NGA, Debbie Copeland, NACO, Brad Rush, NFPO, Tom Schneider and Bill Hammett, AFS-420, Randy Kenagy, AOPA, Mitch Scott, Continental Airlines, Ted Thompson, Jeppesen, Kelly Mckee, MITRE, Kevin Comstock, ALPA, Valerie Watson, NFDC, and Bob Conyers, NBAA. Ted questioned when and how the subject would be brought to the attention of the ATA FMS/RNAV Task Force and ATA Chart & Data Display Committees. Hooper recommended and the ACF members agreed that the ad-hoc working group should first examine the issues. Hooper also requested that all participants review the HBAT and provide input through the ACF-IPG. A copy of Hooper's briefing slides is included as attachment 4.

Status: AFS-410 to lead an ad-hoc working group to resolve the issue. Item Open (AFS-410).

6. Next Meeting: ACF-IPG Meeting 05-01 is scheduled for **May 9-10, 2005** with the FAA's National Aeronautical Charting Office (NACO), Silver Spring, MD, as host. Meeting 05-02 is scheduled for **October 24-25, 2005** with the Air Line Pilots Association (ALPA), Herndon, VA, as host.

Please note the attached Office of Primary Responsibility (OPR) listing (attachment 1) for action items. It is requested that all OPRs provide the Chair, Tom Schneider, (with an information copy to Bill Hammett) a written status update on open issues not later than April 15, 2005 - a reminder notice will be provided.

7. Attachments (4):

1. OPR/Action Listing.
2. Attendance Listing.
3. Frank Flood handout, Re: Issue 98-01-197
4. AFS-410 Briefing Slides, Re: Issue 04-02-258

AERONAUTICAL CHARTING FORUM
INSTRUMENT PROCEDURES GROUP
OPEN AGENDA ITEMS FROM MEETING 04-02

OPR	AGENDA ITEM (ISSUE)	REQUIRED ACTION
AFS-420	**92-02-105** (Circling Areas)	Develop stratified criteria Send formal request to AFS-440 to conduct ASAT testing.
AFS-410	**92-02-110** (Cold Weather Altimetry)	Work issue and report.
AFS-410	**96-01-166** (Descent Point on Flyby Waypoints. Originally "on course")	Place issue on TRB agenda and continue to develop AIM language.
AFS-200	**98-01-197** (Air Carrier Compliance W/Climb Gradients)	Continue to work issue and report. Follow up on 1998 ALPA letter to AGC.
ACF-IPG Chair ATP-120 AFS-420	**00-02-229** (Turbine Powered Holding)	ACF-IPG Chair: Follow up ATP-120 inaction. ATP-120: Provide written position to AFS. AFS-420: Revise Order 7130.3.
AVN-101 AFS-410	**01-01-234** (Designation of Maximum Altitudes in the Final Approach Segment)	AVN-101: Amend VOR/DME RWY 7 SIAP. AFS-410: Expand PCG definition of Missed Approach.
AFS-420	**02-01-238** (Departure Minimums and DP NOTAMs)	Provide DCP material to ATP-320 for DP NOTAMs.
AVN-101 AFS-420	**02-01-239** (MVA Obstacle Accountability and Lack of DVA Criteria)	AVN-101: Monitor development of MVAC automation tool and report. AFS-420 Process new criteria as FAA Notice.
ATP-120 ACF-IPG Chair	**02-01-241** (Non-radar Level and Climbing Holding Patterns)	ATP-120: Develop controller education material on the issue. ACF-IPG Chair: Coordinate Air Traffic response
AFS-420	**02-01-243** (RNAV Holding Pattern Definition)	Forward memo to Air Traffic to correct PCG reference ATD.
ATP-500 & ATP-120	**02-02-246** (Turn Angle Limits for RNAV SIAPs Without TAAs)	Develop controller procedures for "direct-to" RNAV clearances.
AFS-440	**03-01-247** (Holding Pattern Criteria Selection)	Conduct ASAT/simulator analysis and report.
AFS-410	**03-01-248** (Substitution of GPS for Missed Approach Operations)	Continue research on the issue and report.
AFS-420	**04-01-249** (RNAV Terminal Routes for ILS Approaches)	Track criteria development.

AFS-420	**04-01-250** (RNP and Climb Gradient Missed Approach procedures)	Track combined RNAV criteria Order.
AFS-420	**04-01-255** (Rounding of HAT Values for LPV and RNP Procedures)	Track issue and report Research possibility of accelerating IAP development.
AVN-101 AFS-420	**04-02-256** (Impact of Temporary Runway End Changes on RNAV IAPs	AVN-101: Work notification through RAPT/NAPT AFS-420: Review guidance provided ALPA
AFS-420	**04-02-257** (Circling Visibility and LNAV/ VNAV Straight-in Minima)	AFS-420: Present issue for TRB discussion.
AFS-410	**04-02-258** (VNA IAPs using DA(H) and OpSpec C073	Lead ad hoc working group on the issue

AERONAUTICAL CHARTING FORUM
INSTRUMENT PROCEDURES GROUP
ATTENDANCE LISTING - MEETING 04-02

Becker	Hal	AOPA	703-560-3588 FAX: 5159	hal.becker@aopa.org
Behrns	Ann	FAA/NACO	301-713-2832 Ext 140	ann.m.behrns@faa.gov
Brown	Mark	NAVFIG	202-433-0009 FAX: 3458	mark.brown@navy.mil
Chirasello	Vincent	FAA/AFS-410	202-385-4615	vincent.chirasello@faa.gov
Chung	Charles	HAI	703-683-4646	charles.chung@rotor.com
Clayton	Michael	AFFSA	240-857-6701 FAX: 7996	michael.clayton@andrews.af.mil
Comstock	Kevin	ALPA	703-689-4176 FAX:4370	kevin.comstock@alpa.org
Conyers	Bob	NBAA	973-379-0863 FAX: 0806	bconyers@global-aero.com
Copeland	Deb	FAA/AVN-503	301-713-2631 Ext 153	deborah.l.copeland@faa.gov
Dotson	Marshall	TASC	314-259-7880	marshall.dotson@ngc.com
Ewing	Paul	ATO-R (AMTI)	850-678-1060	pewing4@cox.net
Flood	Frank	Air Canada	905-676-4300 Ext 6430	frank.flood@aircanada.ca
Foster	Mike	USAASA	703-806-4869	fosterja@belvoir.army mil
Hammett	Bill	FAA/AFS-420 (ISI)	860-399-9407 FAX: 1834	isiconn@comcast.net
Harris	Hooper	FAA/AFS-410	202-385-4621 FAX: 4653	hooper.harris@faa.gov
Herndon	Al	MITRE/CAASD	703-883-6465 FAX: 6608	aherndon@mitre.org
Hilbert	Mike	AMTI/AAR 460	703-841-4158	michael.ctr.hilbert@faa.gov
Hlubin	Bob	FAA/AFS-630		bob.hlubin@faa.gov
Ingram	Mark	ALPA	417-442-7231	markt@mo-net.com
Jones	Kevin	SWA	210-884-0712	klj@mac.com
Kenagy	Randy	AOPA	301-695-2111	randy.kenagy@aopa.org
Mayhew	Rick	FAA/NFDC	202-267-9329	richard.p.mayhew@faa.gov
McKee	Kelly	MITRE	703-883-3398 FAX: 6608	kmckee@mitre.org
Perry	David	USAASA (Sycoleman)	703-806-4869	david.perry@sycoleman.com
Pray	Gregory	FAA-ATA-110 (AMTI)	202-267-9292	gregory.ctr.pray@faa.gov
Reiss	Tom	ATO-R (AMTI)	703-841-2661	tom.ctr.reiss@faa.gov

AERONAUTICAL CHARTING FORUM
INSTRUMENT PROCEDURES GROUP
ATTENDANCE LISTING - MEETING 04-02

Riley	Mike	NGA/MSF	703-264-3003 FAX: 3133	rileym@nga.mil
Roe	Tim	ATO-W (ISI)	703-841-4144	tim.ctr.roe@faa.gov
Rush	Brad	FAA/AVN-101	405-954-3027 FAX: 4236	brad.w.rush@faa.gov
Schneider	Tom	FAA/AFS-420	405-954-5852 FAX: 2528	thomas.e.schneider@faa.gov
Scott	Mitch	Continental Airlines/ATA	713-324-1786 FAX: 8540	mscott02@coair.com
Secretan	Eric	FAA/AVN-503	301-713-2631 FAX: 1960	eric.secretan@faa.gov
Shorter	John	NGA/PVA	314-263-4510	shorterj@nga.mil
Skiver	Ernie	FAA/AFS-410	202-385-4616	ernie.skiver@faa.gov
Stedman	Sandy	Jeppesen	303-328-4580 FAX: 4123	sandy.stedman@jeppesen.com
Steinbecker	Mark	FAA/AFS-410	202-385-4613	mark.steinbecker@faa.gov
Struyk	Jeffrey	NGA/PVAIS	314-263-4274	struykjc@nga.mil
Thompson	Ted	Jeppesen	303-328-4456 FAX: 4123	ted.thompson@jeppesen.com
Watson	Valerie	FAA/ATA-130	202-267-9302 FAX: 202-493-4266	valerie.watson@faa.gov

Issue 98-01-197- Status Update by Frank Flood, Air Canada

Air Canada research into this issue indicates that there are currently tables/charts available to help resolve this issue. For example, the Airbus chart below shows flap, pressuer altitude, and outside air temperature, and results is a climb gradient. This performance data from the manufacturer allows pilots and dispatchers to be proactive in meeting specified climb gradients. It can also serve as a useful tool for procedure designers and regulators in meeting their requirements.

NORMAL PACK FLOW
ANTI-ICE OFF

ALL ENGINES CLIMB GRADIENT
(FT/NM)

A319-112
PERF ENG
AUG 2004

	AIRPORT PRESS ALT (FT ASL)	OUTSIDE AIR TEMPERATURE (°C) OR FLEX TEMPERATURE (°C)					
		0	10	20	30	40	50
CONF 1	0	476	471	462	435	381	327
	1000	460	454	448	412	358	306
	2000	442	438	430	387	332	287
	3000	425	420	410	364	309	
	4000	409	405	387	340	290	
	5000	394	389	365	318	272	
	6000	378	375	344	297	263	
	7000	366	362	326	278	255	
	8000	355	348	311	265		
	9000	347	335	294	256		
CONF 3	0	471	465	460	432	378	325
	1000	455	450	442	408	354	309
	2000	437	431	425	383	329	302
	3000	421	415	406	361	308	
	4000	405	401	384	338	300	
	5000	392	387	365	318	286	
	6000	385	381	352	305	277	
	7000	377	373	338	289	269	
	8000	369	362	323	278		
	9000	360	347	307	268		

ASSUMPTIONS:

- NO WIND
- 1500 FT THRUST REDUCTION ALTITUDE
- GOOD FOR ALL WEIGHTS UP TO 70000 KGS

Presented by: Captain Frank Flood
Organization: Air Canada
Phone: 905-676-4300 ext 6430
Fax: 905-676-2252
E-mail: frank.flood@aircanada.ca

Use of Published MDA as DH by VNAV Equipped Aircraft

Hooper Harris

Manager

AFS-410

Flight Operations Branch

Overview

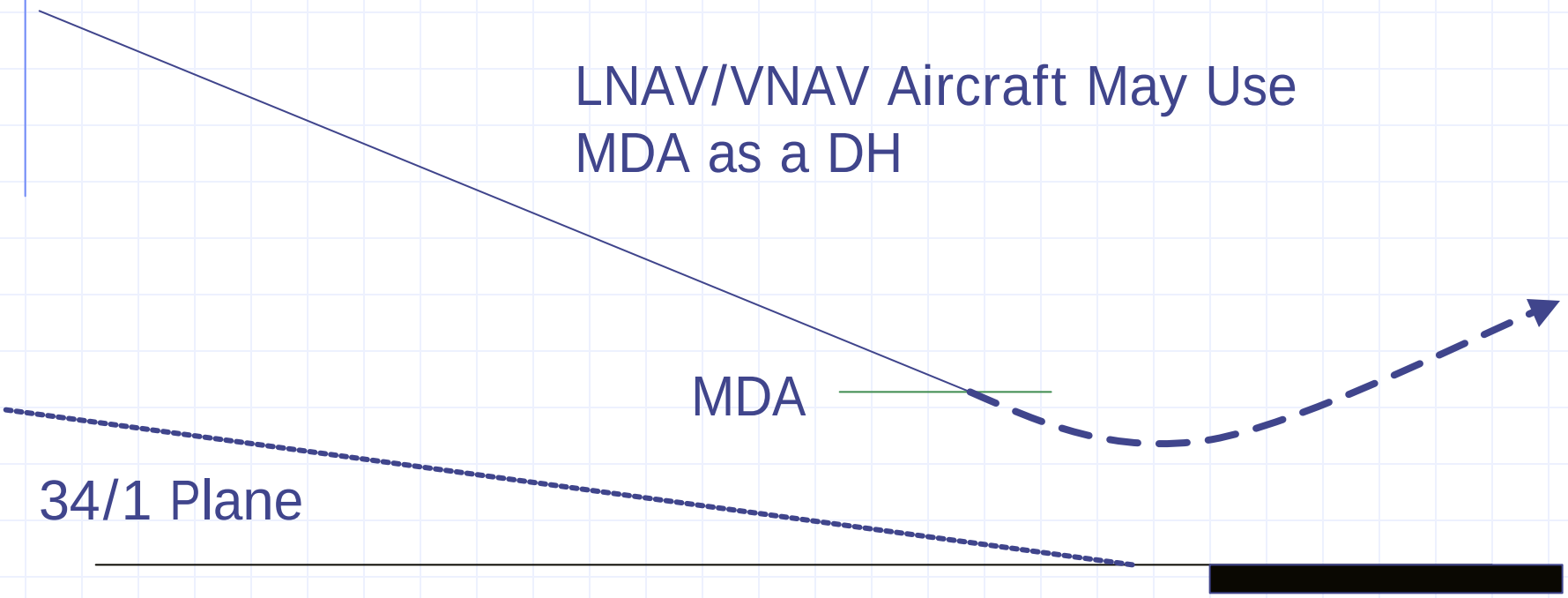
- Operational Concept
- HBAT 99-08
  - Application
  - Requirements
  - Visual Segment
- Changes in the operational environment since HBAT 99-08
- Circumstances in which the FAA Visual Segment Evaluation
- Proposal for use of MDA as DH when an FAA Visual Segment Evaluation has been performed when the procedure is flown using LNAV/VNAV

Operational Concept

Non-Precision Approach

34/1 Surface not Penetrated....

LNAV/VNAV Aircraft May Use MDA as a DH



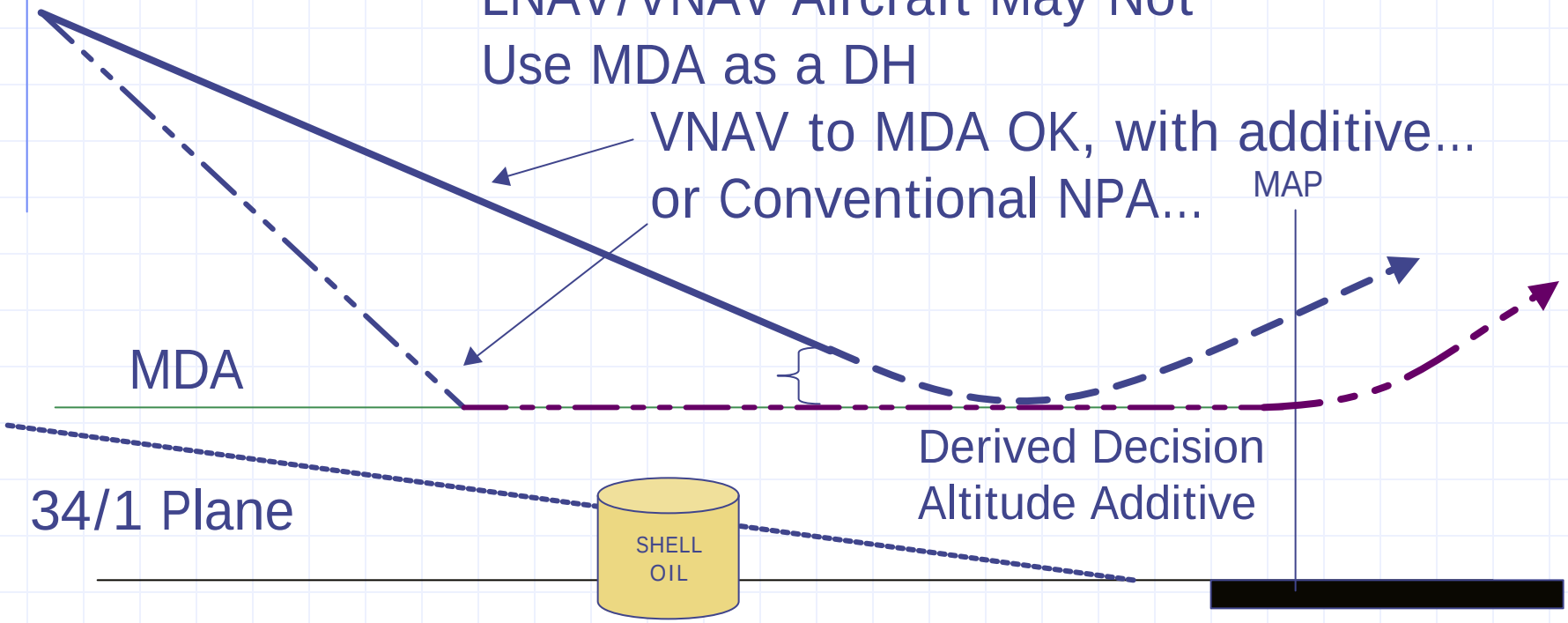
Operational Concept

Non-Precision Approach

34/1 Surface Penetrated....

LNAV/VNAV Aircraft May Not
Use MDA as a DH

VNAV to MDA OK, with additive...
or Conventional NPA...



HBAT 99-08

- Applicability
  - 121/135, 125,129 (*Not* 91)
  - OpSpec C73
  - LNAV/VNAV Equipped
- Requirements
  - Approach
    - Straight-In
    - LOC, SDF, LDA, VOR, (and /DME Variants) NDB, RNAV, GPS
  - Runway
    - Served by ILS, LNAV/VNAV (with DH), or VASI
- Visual Segment Evaluation
  - FAA
    - ILS, LNAV/VNAV (DH), VASI
  - Industry
    - Appendix 1

Changes in the Operational Environment Since HBAT 99-08

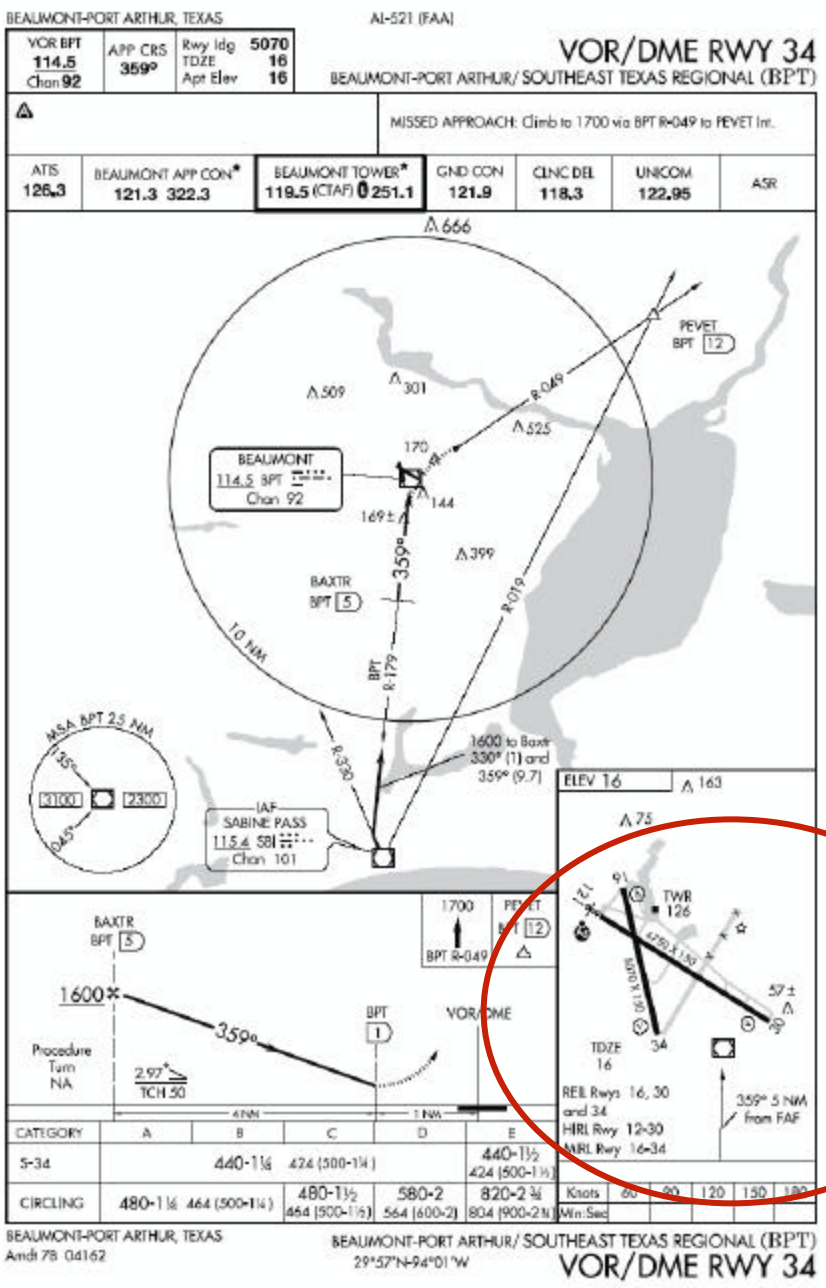
- FAA has produced (as of Sept. '04) 715 LNAV/VNAV (DH) approaches
  - Serving both 14 CFR 139 Airports, and non-139 airports
  - Someday, there will be no need for the HBAT...
- Widespread interest by GA/Corporate users to gain access to this capability in addition to the public LNAV/VNAV procedures
- C73 is a commonly issued OpSpec
  - Much use of Derived Decision Altitude (DDA) by carriers and operators when not exercising C73

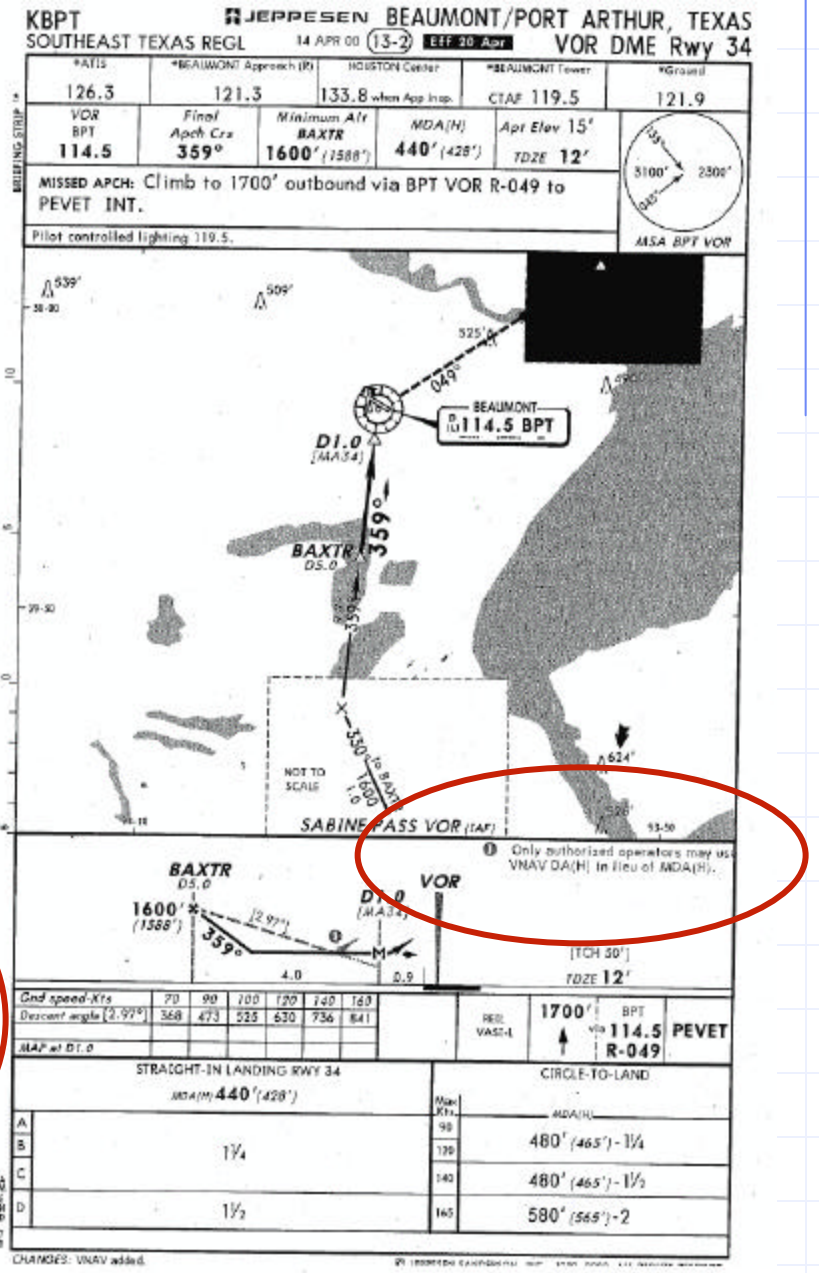
Problems with HBAT 99-08

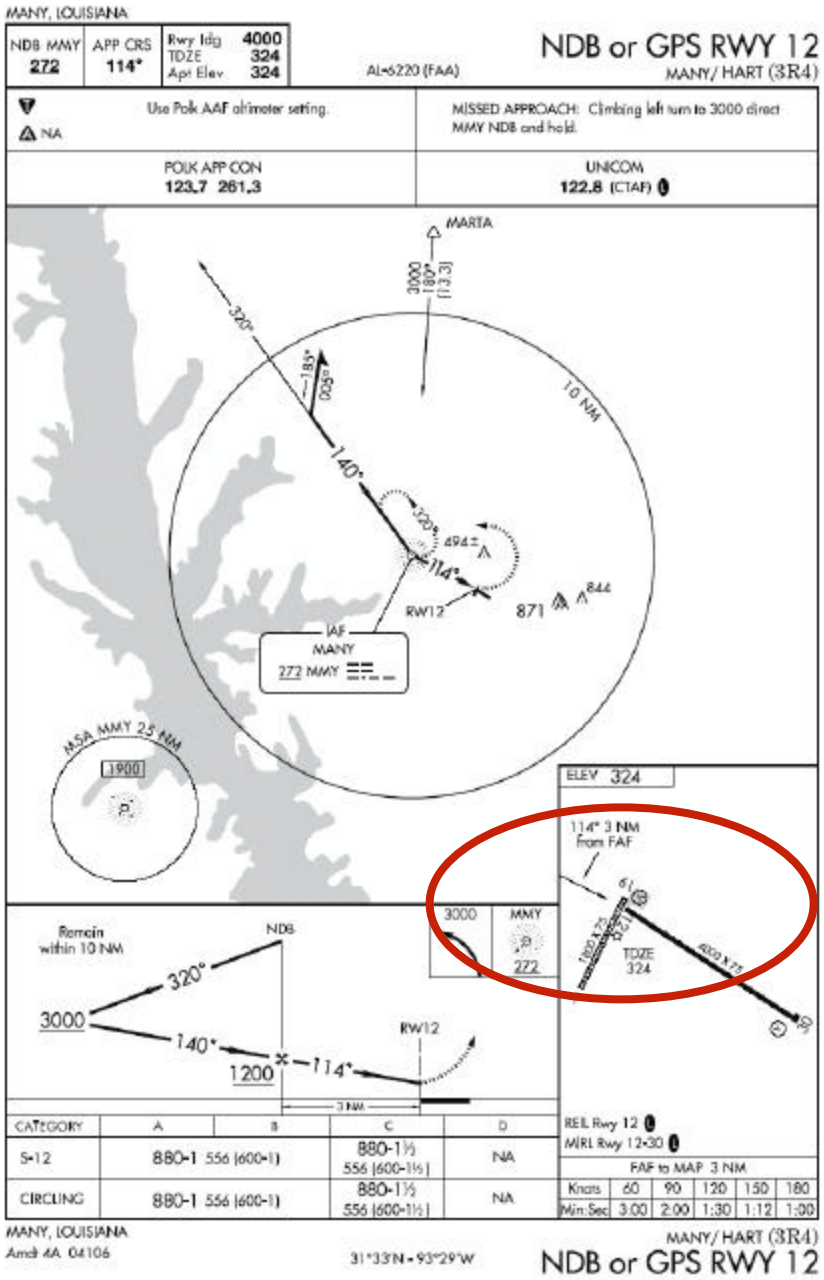
- Some listed procedures do not lend themselves to support LNAV/VNAV to the threshold.
- Meeting one or more of the listed attributes does not automatically mean that the 34/1 surface is clear.
- Crew identification of FAA determination of a clear visual segment is difficult
  - No across-the-board charting standard (NACO)
  - Jeppesen “Ball Note”
    - Incorporation into OpSpecs by at least one major carrier

Approaches and Runways

- Approaches are not always aligned with runways, or aligned with runways that have had an satisfactory visual segment assessment by FAA.
- VASIs may be set for high angles, in order to satisfy clearing obstacles which penetrate the 34/1 plane.


BEAUMONT-PORT ARTHUR, TEXAS
AI-521 (FAA)
VOR/DME RWY 34
BEAUMONT-PORT ARTHUR/ SOUTHEAST TEXAS REGIONAL (BPT)
VOR BPT 114.5 Chan 92
APP CRS 359°
Rwy Idg 5070
TDZE 16
Apt Elev 16
MISSED APPROACH: Climb to 1700 via BPT R-049 to PEVET Int.
ATIS 126.3
BEAUMONT APP CON* 121.3 322.3
BEAUMONT TOWER* 119.5 (CTAF) 251.1
GND CON 121.9
CLNC DEL 118.3
UNICOM 122.95
ASR
BEAUMONT 114.5 BPT Chan 92
PEVET BPT 12
BAXTR BPT 5
IAF SABINE PASS 115.4 SBI Chan 101
MSA BPT 25 NM
10 NM
1600 to Baxtr 330° (1) and 359° (9.7)
ELEV 16
TWR 126
TDZE 16
REIL Rwys 16, 30 and 34
HIRL Rwy 12-30
MIRL Rwy 16-34
359° 5 NM from FAF
1700
BPT R-049
1600
359°
Procedure Turn NA
2.97°
TCH 50
VOR/DME
CATEGORY A B C D E
CIRCLING 480-1 464 (500-1¼) 480-1½ 464 (500-1½) 580-2 564 (600-2) 820-2¾ 804 (900-2¾)
Knots 90 120 150 180
Min:Sec
BEAUMONT-PORT ARTHUR, TEXAS
Amdt 7B 04162
29°57'N-94°01'W
BEAUMONT-PORT ARTHUR/ SOUTHEAST TEXAS REGIONAL (BPT)
VOR/DME RWY 34


KBPT
JEPPESEN
BEAUMONT/PORT ARTHUR, TEXAS
SOUTHEAST TEXAS REGL
14 APR 00 (13-2)
EFF 20 Apr
VOR DME Rwy 34
*ATIS 126.3
*BEAUMONT Approach (P) 121.3
HOUSTON Center 133.8 when App Insp.
*BEAUMONT Tower CTAF 119.5
*Ground 121.9
VOR BPT 114.5
Final Apch Crs 359°
Minimum Alt BAXTR 1600' (1588')
MDA(H) 440' (428')
Apt Elev 15'
TDZE 12'
MISSED APCH: Climb to 1700' outbound via BPT VOR R-049 to PEVET INT.
Pilot controlled lighting 119.5.
MSA BPT VOR
BEAUMONT 114.5 BPT
D1.0 (MA34)
BAXTR D5.0
359°
NOT TO SCALE
SABINE PASS VOR (IAF)
Only authorized operators may use VNAV DA(H) in lieu of MDA(H).
VOR
[TCH 50']
TDZE 12'
Gnd speed-Kts 70 90 100 120 140 160
Descent angle [2.97°] 368 473 525 630 736 841
MAP at D1.0
REIL VASI-L
1700'
BPT VOR 114.5 R-049
PEVET
STRAIGHT-IN LANDING RWY 34
MDA(H) 440' (428')
CIRCLE-TO-LAND
Max Kts
MDA(H)
A B 90 1¼ 480' (465') - 1¼
C 120 140 480' (465') - 1½
D 165 1½ 580' (565') - 2
CHANGES: VNAV added.


MANY, LOUISIANA
NDB MMY 272
APP CRS 114°
Rwy Idg 4000
TDZE 324
Apt Elev 324
AL-6220 (FAA)
NDB or GPS RWY 12
MANY/ HART (3R4)
NA
Use Polk AAF altimeter setting.
MISSED APPROACH: Climbing left turn to 3000 direct MMY NDB and hold.
POLK APP CON
123.7 261.3
UNICOM
122.8 (CTAF)
MARTA
3000 (180° [13.3])
320°
185°
005°
140°
320°
494±
114°
RW12
871
844
10 NM
IAF
MANY
272 MMY
MSA MMY 25 NM
1900
ELEV 324
114° 3 NM from FAF
TDZE 324
Remain within 10 NM
NDB
3000
320°
140°
1200
114°
RW12
3 NM
3000
MMY
272
CATEGORY
A
B
C
D
S-12
880-1 556 (600-1)
880-1½ 556 (600-1½)
NA
CIRCLING
880-1 556 (600-1)
880-1½ 556 (600-1½)
NA
REIL Rwy 12
MIRL Rwy 12-30
FAF to MAP 3 NM
Knots 60 90 120 150 180
Min:Sec 3:00 2:00 1:30 1:12 1:00
MANY, LOUISIANA
Amdt 4A 04106
31°33'N - 93°29'W
MANY/ HART (3R4)
NDB or GPS RWY 12

3R4
HART

JEPPESEN
27 AUG 04 (16-1)

MANY, LA
NDB or GPS Rwy 12

POLK Approach (R)	HART UNICOM
123.7	CTAF 122.8

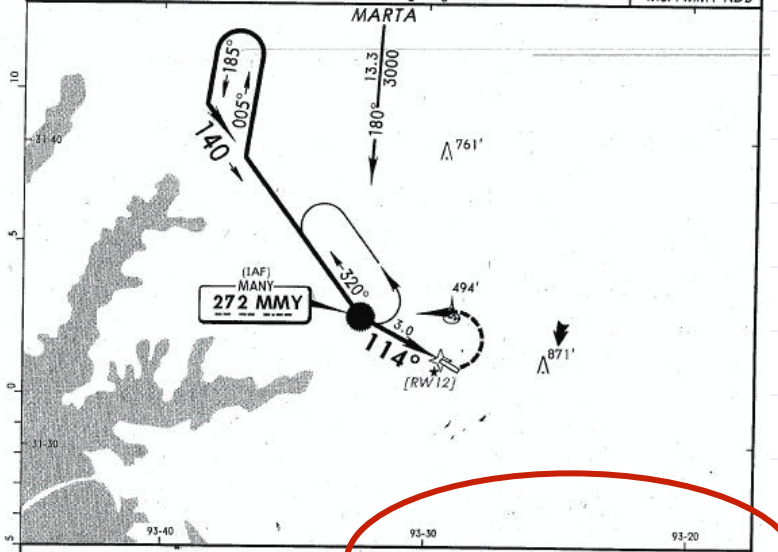
NDB MMY	Final Apch Crs	Minimum Alt NDB	MDA(H)	Apt Elev 324′
272	114°	1200′ (876′)	880′ (556′)	TDZE 324′

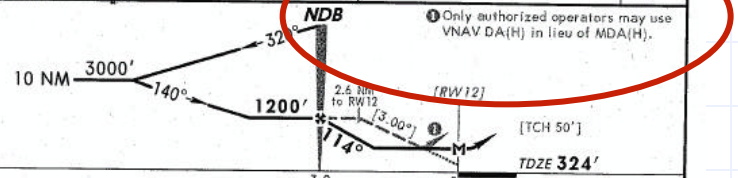
MISSED APCH: Climbing LEFT turn to 3000′ direct MMY NDB and hold.

Alt Set: INCHES | Trans level: FL 180 | Trans alt: 18000′

1. Use Polk AAF altimeter setting. 2. Pilot controlled lighting 122.8.

1900′
MSA MMY NDB





Gnd speed-Kts	70	90	100	120	140	160
Descent angle [3.00°]	372	478	531	637	743	849
NDB to MAP 3.0	2:34	2:00	1:48	1:30	1:17	1:08

REIL AVASI-L | 3000′ LT | MMY 272

STRAIGHT-IN LANDING RWY12

MDA(H) 880′ (556′)

		Max Kts	MDA(H)
A	1	90	880′ (556′)-1
B		120	
C	1½	140	880′ (556′)-1½
D	NA	D	NA

CIRCLE-TO-LAND

CHANGES: Communications.

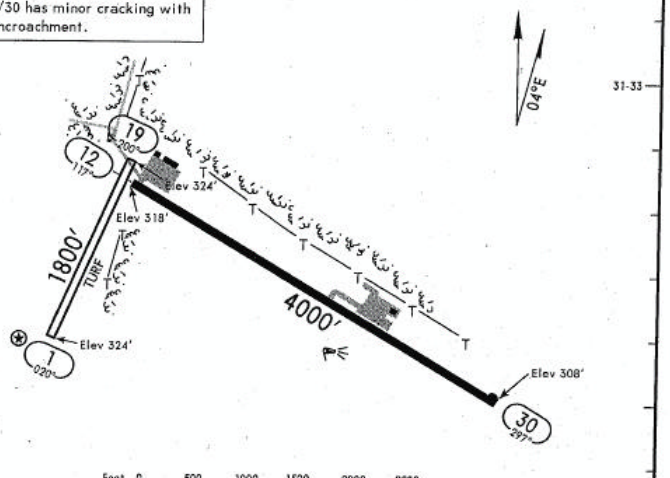
3R4
Apt Elev 324′
N31 32.7 W093 29.2

JEPPESEN
27 AUG 04 (16-1)

MANY, LA
HART

HART UNICOM	POLK Departure (R)
CTAF 122.8	123.7

Rwy 12/30 has minor cracking with grass encroachment.



ADDITIONAL RUNWAY INFORMATION

RWY		USABLE LENGTHS — LANDING BEYOND Threshold	Glide Slope	TAKE-OFF	WIDTH
19					75′
12	❶ MIRL ❶ REIL AVASI-L (angle 4.0°)				75′
30	❶ MIRL AVASI-L (angle 4.0°)				75′

❶ Activate on 122.8.

TAKE-OFF & OBSTACLE DEPARTURE PROCEDURE

	Rwy 30		Rwy 12			FOR FILING AS ALTERNATE
	Adequate Vis Ref	STD	With Min climb of 250′/NM to 900′ Adequate Vis Ref	STD	Other	
1 & 2 Eng	1/4	1	1/4	1	600-3	A B C D NA
3 & 4 Eng		1/2		1/2		

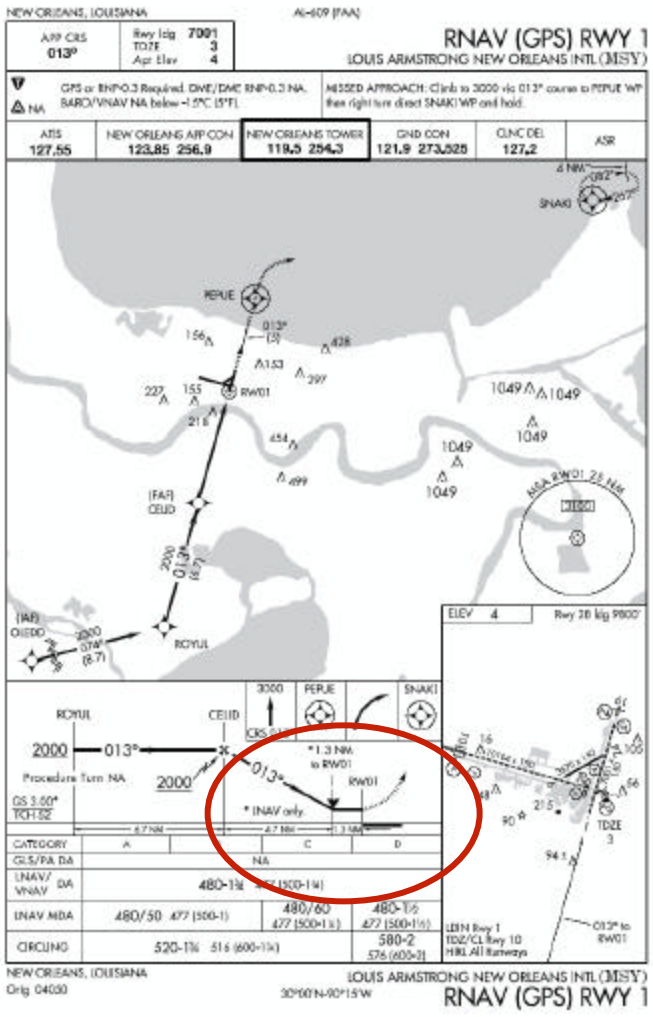
OBSTACLE DP: Rwy 12, climb on runway heading to 900′ before turning eastbound.

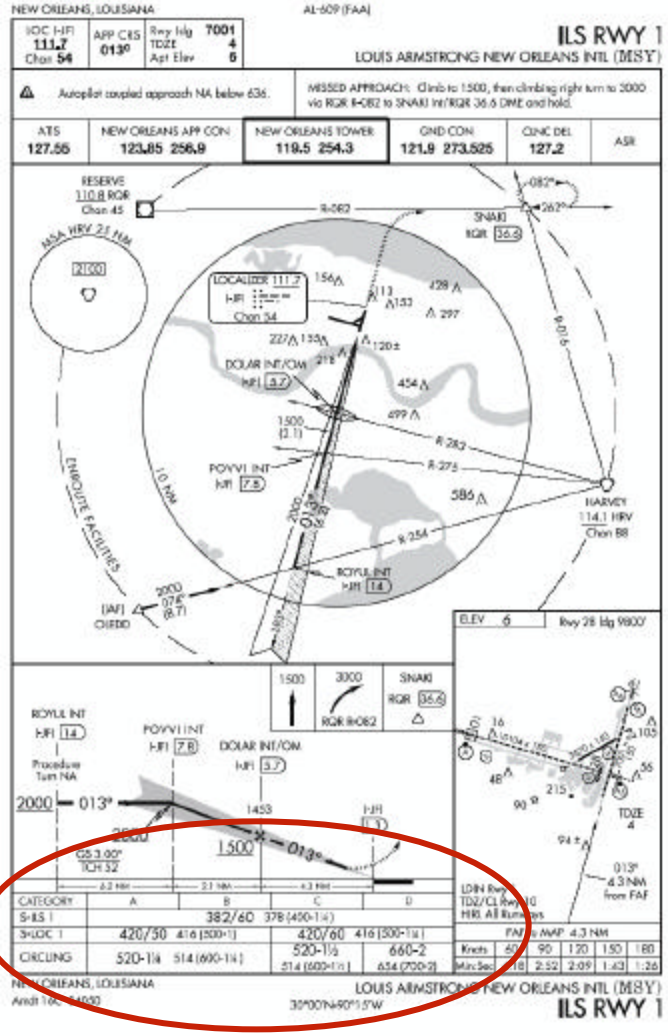
CHANGES: Communications.

Visual Segment Evaluation

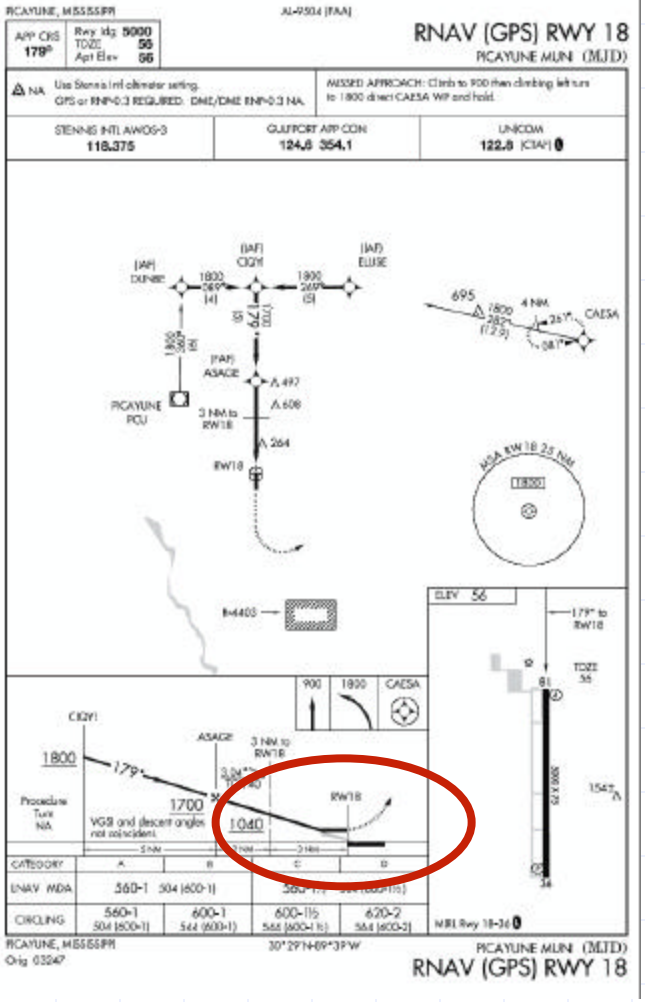
- FAA Visual Segment Assessments are satisfied (no penetrators)at the 34/1 surface:
  - ILS (not always)
  - RNAV with LNAV/VNAV (DH) minima (not always)
  - VASI (not always)
- When identified as such on the appropriate FAA Form 8260-3, line 7 (RNAV Only)
- Industry-conducted assessments IAW Appendix 1 may not actually assess the transition from the approach to the visual segment.

Current 34/1 Symbology





Current 34/1 Symbology



Proposal

Using MDA as a DH

Approach/ Runway

Straight-In within 15°, FAC overflies threshold

VOR, VOR/DME, NDB, RNAV, GPS, LOC, LOC-BC, LDA, SDF

34/1 Visual Segment Satisfactorily Evaluated (FAA or Industry)

Equipment

Per the existing HBAT 99-08

Qualification

121/135, 125, 129
OpSpec C73

91, No LOA

Charting

AIM/AIP

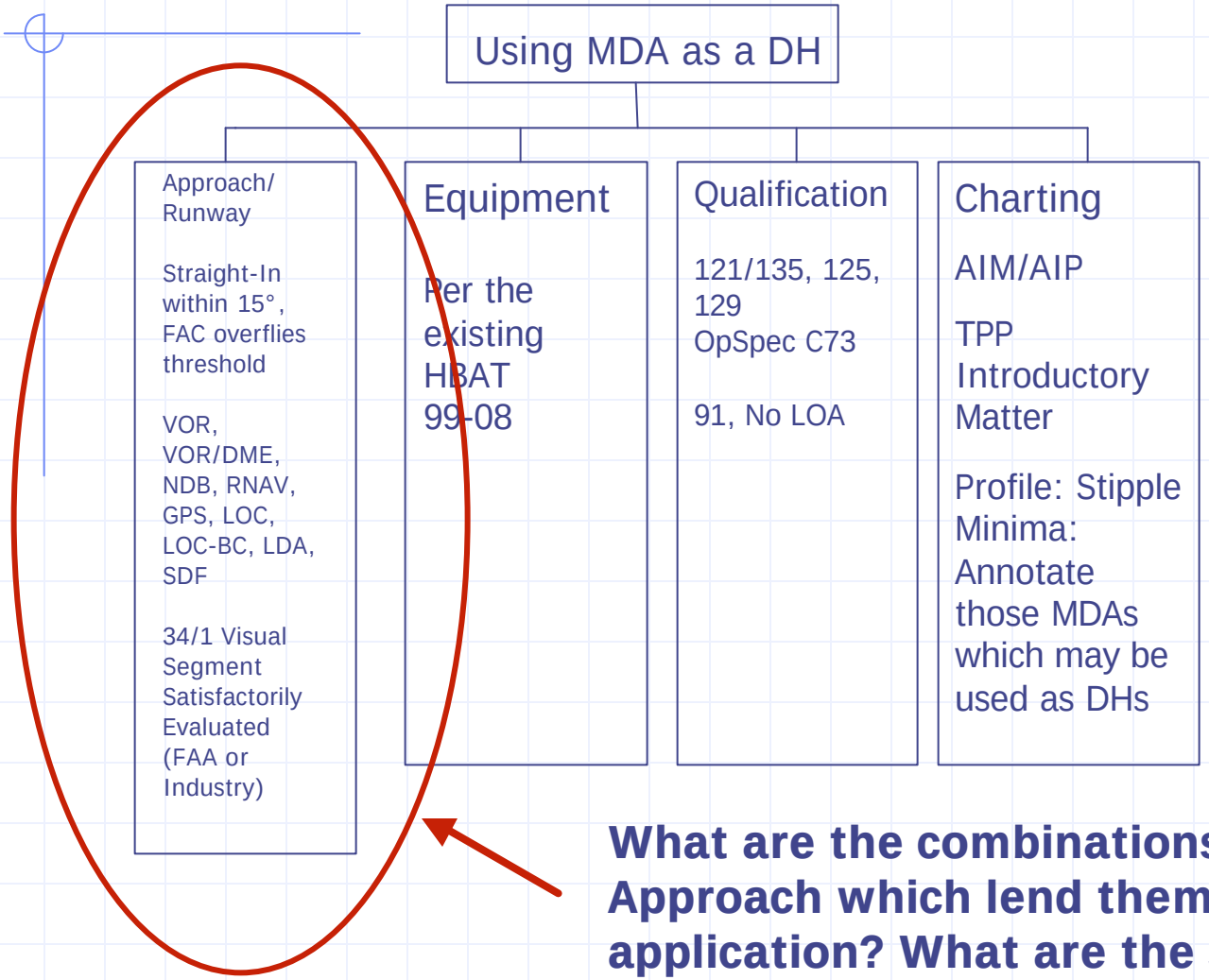
TPP Introductory Matter

Profile: Stipple Minima: Annotate those MDAs which may be used as DHs

Proposal

- Permit MDAs to be used as DH when
  - Aligned within 15 degrees of the runway, with a final approach course that over-flies the threshold
  - Has had a satisfactory (no penetrator) evaluation of of the visual segment
    - FAA, annotated with stipple in profile view, and on the affected line of minima
    - Industry, in accordance with 8260.3B, Para 251 Criteria
- Allow pilots in appropriately equipped aircraft to conduct these procedures
  - OpSpec as required for Part 121/135 or 125, 129
  - No LOA required for 91
- Publish a symbol or notation on the IAP chart which identifies those MDAs which may be used as DH
  - AIM/AIP
  - TPP Introductory material
  - Profile and line of minima symbol/notation

Proposal – Where the hard work is...



What are the combinations of Runway and Approach which lend themselves to this application? What are the standards for the visual segment assessment?

Prototype TPP Front Material

"Operators flying non-preciesion approach procedures using LNAV/VNAV may use published MDAs annotated using partial reverse type (Example: MDA) as DHs when operating and equipped as described in Chapter XX-XX-XXX of the Aeronautical Information Manual and/or in compliance with appropriate Operations Specifications."

Prototype Minima Annotation

VOR RWY 12

Category	A	B	C	D
S-12 MDA	880-1 496 (500-1)		940-1½ 556 (600-1)	

What is Needed From the IPG/ACF?

- Review of the current HBAT 99-08
- Suggestions as to the course of action
  - Do Nothing
  - Cancel the HBAT
  - Revise the HBAT
  - Other
- Provide input to develop technical standards and documentation
- Work collaboratively toward a solution